Design of Blended Learning Mode Based on WeChat Public Platform

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Abstract—**At present, there are some disadvantages in the traditional classroom teaching. The purpose of this study was to explore new technologies and integrate the WeChat public platform into the traditional classrooms, so that it could be a powerful measure to optimize the learning effect. Under the guidance of the blended learning theory, this study tries to fully explore the educational functions of the WeChat public platform. Taking basic computer course as an example, in this study we constructed a blended learning model based on the WeChat public platform and has achieved good teaching effect. The results of this study are suitable for the content of the course which is not strong in logic correlation and suitable for fragmented learning.**

Keywords—WeChat public platform; Blended learning; Learning mode; Mode design

I. INTRODUCTION

The contemporary college students are born after 90, they face an omnipresent network world.

For "digital natives" in the cyber world, digitization is the way they have lived since childhood. Compared with the book reading, contemporary college students are more suitable for screen reading. Many college students play mobile phones in class, which seriously affects the quality of teaching. Many colleges prohibit or restrict the use of mobile phones in the classroom, but it is not a long-term solution. Since the learner's way of learning has changed, we must cross the digital divide to adapt "digital natives" pondered, we must teach in a way that suits them.

Blended Learning is a new type of learning method, which is a combination of online learning and traditional classroom teaching. It can highlight the students ' subject status and help them grasp the system knowledge [1]. The effective development of blended learning is closely related to the excellent online teaching platform and the perfect design of the course teaching mode. As widely used instant communication software, WeChat is popular among college students and has become an indispensable communication tool in life. WeChat launched the WeChat public platform in 2012, which is a brand new platform and application mode. In the function, the WeChat public platform provides the platform for the developers with the business and the technical framework, and constructs the new platform and the application way for the

mobile learning. Exploration of the application and value of WeChat public platform in blended learning has broad application prospects.

II. FUNCTION ANALYSIS

Singh & Reed believes blended Learning to be "appropriate" at the right time by applying "appropriate" learning techniques to "appropriate" learning styles, delivering "appropriate" abilities to "appropriate" learners to achieve optimal Learning effect of learning. When building a blended learning model, it is important to select the "appropriate" technology to fully exploit the potential of this technology and make it suitable for the specific teaching of the curriculum [2]. At present, the network teaching environment of colleges has been greatly improved, and more and more colleges use the network teaching platform to carry out the blended teaching. This paper chooses the WeChat public platform as the technical support of the network teaching platform, and its advantages in function is as follows:

A. Wide audience

Wechat's mobility, convenience and personalization are popular among college students. The author randomly selected 40 students, distributed questionnaires to them, and investigated the use of WeChat. During the investigation, they found that WeChat were installed in virtually every cell phone, and most students said that they would check the WeChat many times a day, and expressed great interest in the new function of the Wechat. College students have a high degree of recognition of WeChat, which lays a solid foundation for the smooth start of blended learning.

B. Effective dissemination

Through the WeChat public platform, both individuals and businesses can create a WeChat public account and achieve all-round communication and interaction with texts, pictures and voices of specific groups. After logging in WeChat public platform on the computer, you can push the message directly to the mobile phone, spread more effectively. WeChat public platform can group users, push different information for different groups, to ensure the accuracy of message pushing.

C. Rich resources

Resources are rich and easy to share. Resource content is no longer limited to text, but rich in pictures, text, sound, and video. In addition to the use of chat, users can also through the "Circle of Friends" function, through the reprint, forwarding and "@" function to share content with friends, so that learners can share the state of learning anytime, anywhere.

D. Convenient interactive way

In the WeChat public platform, users can interact with the public as if they were communicating with their friends. WeChat public number also can push information to the public immediately. Through the expanded functions of the WeChat public platform, you can share the geographic location with each other and the interactive features of the platform are stronger

Using these advantages of the WeChat public platform, it can provide a series of teaching support for the blended learning, for example, it can be used for sharing resources, clarifying learning tasks, learning communication and curriculum evaluation. These advantages of WeChat public platform should be fully exploited for blended learning. There is no doubt that the support of the WeChat public platform will provide a new environment for the blended learning of colleges, and fully expand the social interaction space between teachers and students.

III. SUMMARY OF DESIGN

The blended learning model design includes three stages: front-end analysis, activity and resource design, and teaching evaluation design, in which activity and resource design are the most representative stages of the blended learning [3]. Front-end analysis includes learner characteristics analysis, learning content analysis, blended learning environment analysis; Activity and resource design are the combination of mobile learning activities supported by WeChat public platform and traditional classroom teaching. Taking basic computer course as an example, the teaching activities and resources are designed; teaching evaluation design includes learner mutual assessment, online testing and teaching evaluation. Build a blended learning model supported by WeChat public platform, the model design shown in Figure 1.
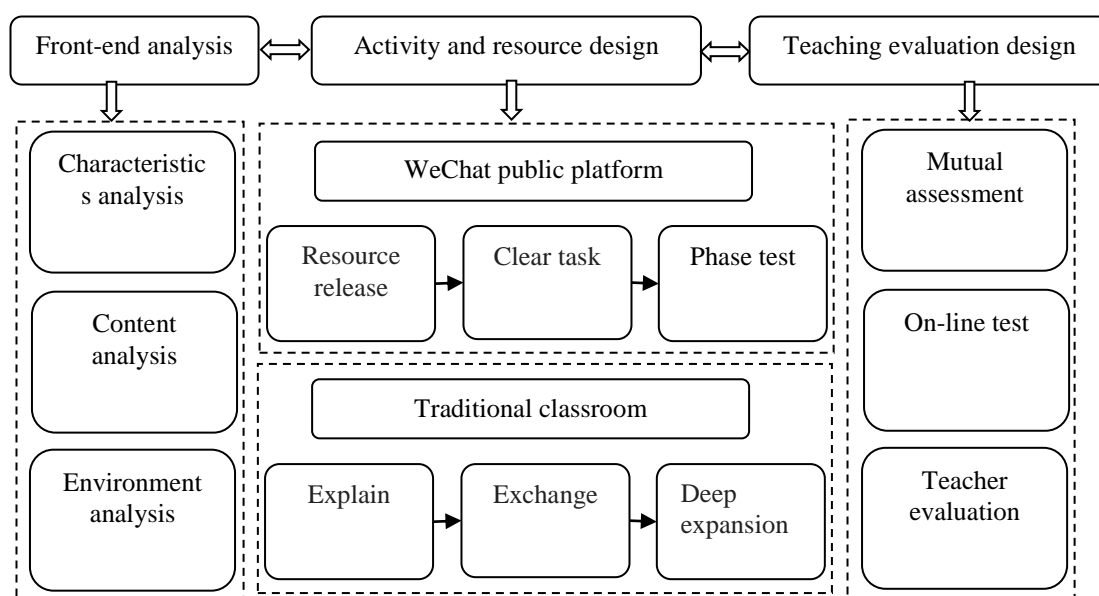

Fig. 1. Blended learning model based on WeChat public platform

A. Front-end analysis

The front end is to analyze and interpret the specific courses in three aspects before the blended learning, learner characteristics analysis, learning content analysis, blended learning environment analysis, to determine whether the course is suitable for blended learning.

1) Learner characteristics analysis

Basic computer course is a public basic course for all students. The foundation of the learner is uneven. With the popularization of basic education informatization, in many developed areas, in the middle school and high school, it has been offered information technology courses; they urgently need to further study, master the updated knowledge and skills. However, students who have not been learned such courses have fewer opportunities to contact with computers and urgently need to solve the problem of the popularization of basic skills. Students' learning needs and individual differences in a teaching class are larger. But students have a strong interest in curriculum learning. In the traditional classroom teaching, only using a single teaching method of teaching or teaching demonstration ignores the different needs of students and individual differences. It will seriously affect the students' enthusiasm for participation, self-exploration and personal

development [4]. Therefore, this course is suitable for blended learning.

2) Learning content analysis

Each chapter of the course is a more complete unit, and can be further divided into a number of knowledge points. Some basic theoretical knowledge and operational skills, suitable for learners' fragmented learning. The expanded course content includes a lot of updated and highly technical content, which is suitable for learner personalized learning content, which can be pushed on the WeChat public platform.

3) Blended learning environment analysis

The cost of mobile communication network is reduced, which enables the hybrid learning environment to be realized in network and communication. Smart mobile terminals such as mobile phones and tablet computers are quite popular among college students and they already have a certain basis for understanding and using information media.

B. Activity and resource design

Activities and resource design phase are the most crucial stages in the design of blended learning mode, which determines whether blended learning can be successfully carried out. WeChat public platform provides a number of functional services, which provide teachers with the release of resources information, organization of the application of teaching activities. It provides students with mutual exchange, personalized learning convenience. Teachers can provide students with a variety of learning resources, such as text, audio, video and so on before class, make clear the Learning goal and task connect the new knowledge with the real life, so that the students can study in the traditional classroom from the actual needs. Students can pay attention to the information in the public at anytime and anywhere, according to their original knowledge structure, select the appropriate information resources to preview before class, review after class and other activities, and can communicate with teachers and other learners at any time through this platform. The specific features of resource design are shown in table 1:

TABLE I   WECHAT PUBLIC PLATFORM SUPPORT FOR RESOURCE DESIGN

Function category	Application support	Activities and resource design
Mass message	Public number proactively pushes important notices or interesting content to users.	• Release Course Announcements • Release Learning Tasks • Release learning materials
Customizing menus	Set up custom menus on demand at the bottom of the session interface, and you can set the response action for the custom menu by clicking the menu, receiving the message you specified or jumping to the specified page.	• Provide navigation capabilities • Provide fast human-computer interaction • Integration of curriculum resources
User Management	Queries, creates, modifies, and uses interfaces to move users to a group when needed	• Managing Learners • Targeted push messages for different groups of learners
Auto Reply	The user takes the active message from the public number according to the specified keyword.	• Building Resource Retrieval • Online FAQ
Vote	Multiple issues can be set, voting expiration time, voting rights, etc.	· Online Testing · Online survey · Students ' mutual evaluation
Data statistics	The data statistic function divides into the user analysis, the graph analysis, the message analysis three kinds.	• Statistical learning • Push the right resources for statistics

To carry out blended learning teaching activities, we need to make a connection between the teaching activities supported by the WeChat public platform and the teaching activities in the traditional courses. The whole blended teaching activity is divided into two stages: the first stage is mobile basic learning. Through the WeChat Group and the WeChat public platform, the teachers publish the leading learning materials, such as

pictures, text, PPT and video, and create rich learning situations and learning tasks. Learners carry out basic learning activities, build their own connections between new and old knowledge, complete phased testing and shorten the gap with other learners. The second stage is to consolidate and improve on the basis of the first stage, teachers focus on knowledge and

problem solving based on the WeChat data statistics, to carry out further study.

C. Teaching evaluation design

WeChat public platform provides a powerful functional support for learning evaluation. Teaching evaluation design can be carried out through the following three aspects: 1) Learner mutual assessment. Create a Learning results display area through a custom menu to provide a platform for learners to demonstrate the results of a phased learning, and to take the reader's praise as an indicator of achievement. 2) On-line test. Through the online test to grasp the learner's learning status, evaluate the learning effect. 3) Teacher evaluation. Track and record the number of readers, the number of people to share, the number of clicks on the menu, the number of messages sent, etc., to determine the activities of learners' participation. Participation is an important part of formative evaluation.

IV. CONCLUSION

In this study, we take basic computer course as an example to construct a blended learning model and achieve good teaching results. However, this model design is only suitable for courses that are less relevant in logic and suitable for fragmented learning. Today, with increasing emphasis on personalized learning, Wechat will provide a broader learning platform for higher education and teaching activities.

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